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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,663	01/15/2004	Zhenguo Gu	TI-35761 (1962-06800)	5896

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EXAMINER	
WILLIAMS, HOWARD L	

ART UNIT	PAPER NUMBER
2819	

NOTIFICATION DATE	DELIVERY MODE
09/14/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/758,663

Applicant(s)

GU ET AL.

Examiner

Howard L. Williams

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless –  
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.*

Claims 10-27 are rejected under 35 U.S.C. 102(e) as anticipated by Xin (US 7024596 B2). Xin discloses an interleaver/de-interleaver system which can operate under multiple interleaving/de-interleaving schemes (120, 140; fig. 2; col. 5 lines 15 and 36). Xin discloses development of a starting address, i.e. the initial value of the claims, register and offset value register. The values stored in these registers may be determined offline (col. 2, lines 37-58). Xin discloses the starting or initial value register as static for a selected interleaver and the offset value register as a dynamic register whose values may change over time and is thus updatable. These values are combined to provide the address and together are seen as the claimed index. These values are in part disclosed by Xin to relate to desired delay, values for which may be stored in memory or look-up table 740A (col. 10, line 60) relating to the technique or scheme of interleaving/de-interleaving being current employed. Reference to various communication systems is found in column 4 lines 35-36 and would naturally employ a receiver. Linear combinations of the values to provide the addresses/delays appears in col. 16, line 49.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xin (US 7024596 B2) in view of

Xin discloses a configurable interleaving or de-interleaving system that provides at least convolutional interleaving with adjustable offset, delay, word or block size (col. 13, lines 10-20). However, Xin was not noted to particularly disclose a pruning adjuster to modify the offset or a boundary regulator. Regarding the boundary regulator although Xin does not explicit use such terms the determination of offset address as shown in equation 6 (col. 14, line 25) involves the use of "if" statements that necessarily invoke a comparison or check of the values. Eroze (US 20020087923 A1) discloses a turbo code system with interleaving and plainly evinces that pruning is the deletion of invalid indices from a basic interleaver which is tuned to a particular length. It would have been obvious to include a pruning adjuster such as disclosed by Eroze in Xin to avoid invalid indices of the address because it would avoid errors in the recovered sequence.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mantha et al. (US 20040240409 A1) discloses the use of different

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sets of interleaving parameters and notes its use in 3G wireless systems [patent family WO 03013046 2/13/03].

Any inquiry concerning this communication should be directed to Howard L. Williams at telephone number 571.272.1815. The Patent and Trademark Office central facsimile number for application specific correspondence intended for entry is 571-273-8300.

9/7/07  
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*Howard L. Williams*  
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Art Unit 2819